

CLAIMS

1. A signal transmission system for transmitting a video signal, comprising:
 - a signal transmission unit including:
 - a decoder which receives digital broadcasting and outputs a luminance signal and two color difference signals, and
 - an encoding circuit which encodes the luminance signal and the respective color difference signals into signal forms suited to a transmission path, and transmits the encoded signals; and
 - a signal reception unit including:
 - a decoding circuit which receives the encoded luminance signal and respective color difference signals, and decodes these signals,
 - a luminance signal processing circuit which processes the decoded luminance signal,
 - a color difference signal processing circuit which processes the respective decoded color difference signals, and
 - a signal conversion circuit which converts the luminance signal outputted from the luminance signal processing circuit and the respective color difference signals outputted from the color difference signal processing circuit into RGB signals.

2. A signal transmission system for transmitting a video signal through a transmission path, comprising:

a signal transmission unit including;

a decoder which receives digital broadcasting and outputs a luminance signal and two color difference signals.

a time division multiplexing circuit which sub-samples the two color difference signals to signals with half pixel rates, subjects the signals to time division multiplexing, and outputs a multiplexed signal, and

an encoding circuit which encodes the luminance signal and the multiplexed signal into signal forms suited to a transmission path, and transmits the encoded signals; and

a signal reception unit including:

a decoding circuit which receives the encoded luminance signal and multiplexed signal, and decodes these signals.

a demultiplexing circuit which demultiplexes the decoded multiplexed signal into the original two color difference signals.

a luminance signal processing circuit which processes the decoded luminance signal.

a color difference signal processing circuit which processes the respective color difference signals demultiplexed, and

a signal conversion circuit which converts the luminance signal outputted from the luminance signal processing circuit and the respective color difference signals outputted from the color difference signal processing circuit into RGB signals.

3. A signal transmission system for transmitting a video signal and an audio signal, comprising:

a signal transmission unit including;

an MPEG decoder which receives digital broadcasting and outputs the video/audio signal,

an output interface which outputs the video/sound signal that has been outputted from the MPEG decoder,

an I2C controller which outputs an I2C (Inter IC control) signal,

a CPU which controls the whole unit, and

a program ROM which stores an operation program of the CPU; and

a signal reception unit including;

an input interface which receives the video/audio signal from the signal transmission unit,

a device interface which converts the video/audio signal into a video image and a sound,

a video/audio output device which outputs the video image and the sound outputted from the device interface, to the

outside, and

an I2C controller which has a ROM table in which information relating to performance of the signal reception unit is stored, receives an I2C signal from the signal transmission unit, and outputs the information stored in the ROM table to the signal transmission unit according to a request from the signal transmission unit.

4. The signal transmission system as defined in Claim 3, wherein

the ROM table stores information relating to resolution of a video image that can be outputted from the video/audio output device.

5. The signal transmission system as defined in Claim 3, wherein

the ROM table stores information relating to the number of channels of audio that can be outputted from the video/audio output device.

6. The signal transmission system as defined in Claim 3, wherein

the ROM table stores information relating to a signal conversion method for converting the luminance signal and color difference signals into RGB signals.

7. The signal transmission system as defined in Claim 3,
wherein

the ROM table stores information relating to gamma control
of the video signal.

8. The signal transmission system as defined in Claim 3,
wherein

the ROM table stores information relating to whether or
not the signal reception unit has a mode in which a video image
is not subjected to enhancement processing.

9. The signal transmission system as defined in Claim 3,
wherein

the ROM table stores information relating to a maker code
and a device code of the signal reception unit.

10. The signal transmission system as defined in Claim 3,
wherein

the signal reception unit outputs the kind of aspect
conversion processing that is currently performed to output a
video image, to the signal transmission unit through the I2C
controller.

11. The signal transmission system as defined in Claim 3,

wherein

the signal transmission unit includes a selector which multiplexes control information in a vertical retrace period of the video signal and outputs it, said control information indicating whether a video frame signal, that is currently outputted from the MPEG decoder separately from the video/audio signal, is generated by being repeatedly outputted in the MPEG decoder or not; and

the signal reception unit includes

a control information separation unit which separates the control information from the video signal, and

a picture quality control unit which subjects the video signal to an adaptive signal processing according to the control information, and outputs the video signal to the device interface.

12. The signal transmission system as defined in Claim 11, wherein

the control information is information indicating a picture encoding method based on the MPEG standard, by which I, P, and B pictures can be discriminated from each other.

13. The signal transmission system as defined in Claim 11, wherein

the control information is information of compression

ratio based on the MPEG standard.

14. The signal transmission system as defined in Claim 11, wherein

the control information is information indicating whether a material before being MPEG-encoded is picked up by progressive scanning or interlaced scanning.